SQLite3 + CRUD Full Summary

# 1. CRUD Operations

## Create

- CREATE TABLE: New table banane ke liye.  
Example:  
CREATE TABLE users (  
 id INTEGER PRIMARY KEY AUTOINCREMENT,  
 name TEXT,  
 email TEXT UNIQUE  
);  
- INSERT INTO: Data insert karne ke liye.  
Example:  
INSERT INTO users (name, email) VALUES ('Ali', 'ali@gmail.com');

## Read

- SELECT: Data read karne ke liye.  
Example:  
SELECT \* FROM users;  
SELECT name, email FROM users WHERE id = 1;  
SELECT \* FROM users ORDER BY name ASC LIMIT 5;

## Update

- UPDATE: Data modify karne ke liye.  
Example:  
UPDATE users SET name = 'Raza' WHERE id = 1;

## Delete

- DELETE: Data remove karne ke liye.  
Example:  
DELETE FROM users WHERE id = 2;

# 2. SQLite3 Basics

## Schema

Database ka structure (tables, columns, relationships) ko schema kehte hain.

## Tables

Table rows aur columns ka set hota hai jisme data store hota hai.

## Data Types

SQLite main common data types:  
- INTEGER  
- REAL  
- TEXT  
- BLOB  
- NULL

## Ordering & Limiting

Data ko sort aur limit karne ke liye:  
SELECT \* FROM users ORDER BY age DESC LIMIT 3;

# 3. Constraints

## PRIMARY KEY

Har row ka unique identifier hota hai. Duplicate aur NULL allowed nahi hote.

## AUTOINCREMENT

PRIMARY KEY ke sath use hota hai aur automatic next number assign karta hai.

## UNIQUE

Column ke values unique rehni chahiye.

## NOT NULL

Column empty nahi reh sakta. Har row me value dena zaroori hai.

## DEFAULT

Agar koi value na di jaye to default value assign hoti hai.

## FOREIGN KEY

Ek table ke column ko doosre table ke column se link karta hai. Relationship banane ke liye use hota hai.